

Appl. No. 09/728,832
NCR Docket No. 9261
Reply to Office Action Mailed June 7, 2004

LISTING OF CLAIMS

1. (Previously Presented) A method, comprising:
receiving data to be stored in a database system having plural data servers;
receiving information associated with at least one characteristic of the data;
partitioning the data for storage in the database system based on the characteristic associated with the data; and
storing the partitioned data in storage units associated with the plural data servers;
and
in response to a database query, selecting less than all the plural data servers based on the partitioning of the data to reduce a number of data servers involved in processing the database query.
2. (Previously Presented) The method of claim 1, wherein receiving the information comprises receiving the information from a client system.
3. (Original) The method of claim 1, wherein receiving the information comprises receiving at least one of an average value of the data, a uniform distribution of the data, a minimum value of the data, and a maximum value of the data.
4. (Original) The method of claim 3, wherein partitioning the data comprises defining straight-line segments based on at least one of the average value of the data, the uniform distribution of the data, the minimum value of the data, and the maximum value of the data.
5. (Original) The method of claim 4, wherein partitioning the data further comprises defining breakpoints to provide the straight-line segments.

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6. (Previously Presented) The method of claim 1, wherein partitioning the data for storage in the database system comprises dividing the data into buckets containing related data.

7. (Original) The method of claim 1, wherein partitioning the data comprises organizing the data into related portions.

8. (Original) The method of claim 7, wherein partitioning the data further comprises executing an algorithm to organize the data.

9. (Original) The method of claim 1, wherein storing the partitioned data in the database system comprises storing the partitioned data in a relational database system.

10. (Cancelled)

11. (Previously Presented) A system, comprising:

a database;

a network interface;

plural storage modules and data servers;

a database controller coupled to the database, wherein the database controller is adapted to receive partitioning information and perform a partitioning task on data received through the network interface based on the partitioning information to partition the data into plural groups,

the database controller adapted to further store the plural groups of the data partitioned by the partitioning task into plural storage modules associated with corresponding plural data servers,

the database controller adapted to select, in response to a database query, less than all the plural data servers based on the partitioning information to reduce a number of data servers involved in processing the database query.

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12. (Previously Presented) The system of claim 11, wherein the database is part of a parallel database system.

13. (Original) The system of claim 11, wherein the database is a relational database.

14. (Previously Presented) The system of claim 11, wherein the database controller comprises:

a query coordinator coupled to the network interface, the query coordinator to receive the database query from the network interface;

a partitioner to partition data and perform selecting of less than all the plural data servers; and

a partitioner data storage coupled to the partitioner, the partitioner data storage to store the partitioning information associated with at least one characteristic of the data to enable the partitioner to partition data.

15. (Previously Presented) The system of claim 14, wherein the partitioner is capable of executing an algorithm, based on the stored partitioning information, for partitioning the data.

16. (Previously Presented) The system of claim 15, wherein the plural data servers are adapted to store and access partitioned data in the database.

17. (Original) The system of claim 11, further comprising a client system, wherein the client system sends data to the database through the network interface.

18. (Previously Presented) The system of claim 17, wherein the client system is adapted to further send the partitioning information to be used by the database controller to partition the data.

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19. (Previously Presented) An article comprising one or more storage media containing instructions that when executed cause a device to:

receive information associated with at least one characteristic of data to be stored into a database system from a remote device;

partition the data for storage in the database system based on the characteristic of the data;

store the partitioned data in the database system in plural storage modules associated with plural data servers; and

in response to a database query, select less than all the data servers based on the information to reduce a number of data servers involved in processing the database query.

20. (Original) The article of claim 19, wherein the instructions when executed cause the device to execute an algorithm to partition the data.

21. (Original) The article of claim 19, wherein the instructions when executed cause the device to divide the data into segments containing related data.

22. (Previously Presented) The method of claim 1, wherein receiving the information comprises receiving organizational information, and wherein selecting less than all the plural data servers is based on the organizational information.

23. (Previously Presented) The method of claim 22, wherein selecting less than all the plural data servers is based on the organizational information and a characteristic of data requested by the database query.

24. (Previously Presented) The method of claim 1, further comprising:
retrieving search results obtained by the selected data servers;
determining whether the search results are satisfactory; and

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selecting at least one more data server to process the database query if the search results are not satisfactory.

25. (Previously Presented) The method of claim 1, wherein partitioning the data comprises partitioning the data into logical groups.

26. (Previously Presented) The method of claim 1, further comprising storing the information by a partitioner, wherein selecting less than all the data select is performed at least in part by the partitioner.

27. (Previously Presented) The system of claim 11, the database controller to select less than all the plural data servers based on the partitioning information and a characteristic of data requested by the database query.

28. (Previously Presented) The system of claim 11, wherein the selected data servers are adapted to retrieve search results in response to the database query, and the database controller is adapted to determine whether the search results are satisfactory and to select at least one more data server to process the database query if the search results are not satisfactory.

29. (Previously Presented) The article of claim 19, wherein the instructions when executed cause the device to receive information comprising partitioning information.

30. (Previously Presented) The article of claim 29, wherein the instructions when executed cause the device to select less than all the plural data servers based on the partitioning information and a characteristic of data requested by the database query.

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31. (Previously Presented) The article of claim 19, wherein the instructions when executed cause the device to:

retrieve search results obtained by the selected data servers;
determine whether the search results are satisfactory; and
select at least one more data server to process the database query if the search results are not satisfactory.